PRODUCTION OF FLUORENONE

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Abstract

PURPOSE:To improve the production process for fluorenone by oxidizing fluorene dispersed in a mixture of agueous sodium hydroxide and an organic solvent immiscible with water with molecular oxygen in the presence of a quaternary ammonium salt.
CONSTITUTION:An organic solvent having 80 to 150 deg.C standard boiling point such as toluene is used to effect oxidation reaction at a temperature lower than 100 deg.C so that the water vaporized during the oxidation reaction is accompanied by the exhaust gas after and removed out of the reactor. The oxidation reaction is accelerated and the reaction mixture can reeadily be separated into the oil phase and the aqueous phase and the recovered sodium hydroxide solution can be reused without concentration and the consumption of the catalyst can be saved. The product can readily be separated from the solvent by single distillation.

ANSWER 2 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN
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TITLE: Preparation of **fluorenone** from **fluorene**
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AB **Fluorenone** (I) is prepared by blowing mol. O to **fluorene** (II)-containing materials at ≤100° in the presence of quaternary ammonium salts in a heterogeneous system containing aqueous alkali solns. and H2O-immiscible organic solvents with b.p. 80-150° with removing resulting H2O by accompanying exhaust gases used in the reaction. The alkali solns. can be separated from the reaction mixts. and recycled. Diluted air was introduced to a mixture of II-containing oil, MePh, aqueous 40% NaOH, and Quartamin D 86P (**distearyldimethylammonium chloride**) at 50° with removing the air and H2O to give 95% I.